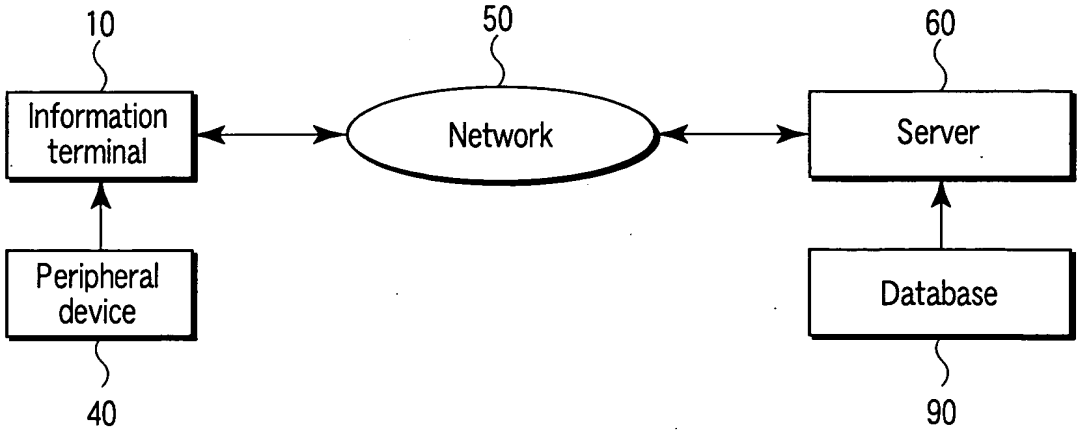

FIG. 1

Address : www.olympus.co.jp/service/etc/
Language ID : JP

↓

URL : http://www.olympus.co.jp/service/etc.jsp?langid=/JP

FIG. 2A

Address : www.olympus.co.jp/service/etc/
Serial No. : 12345

↓

URL : http://www.olympus.co.jp/service/etc.jsp?serial=12345

FIG. 2B

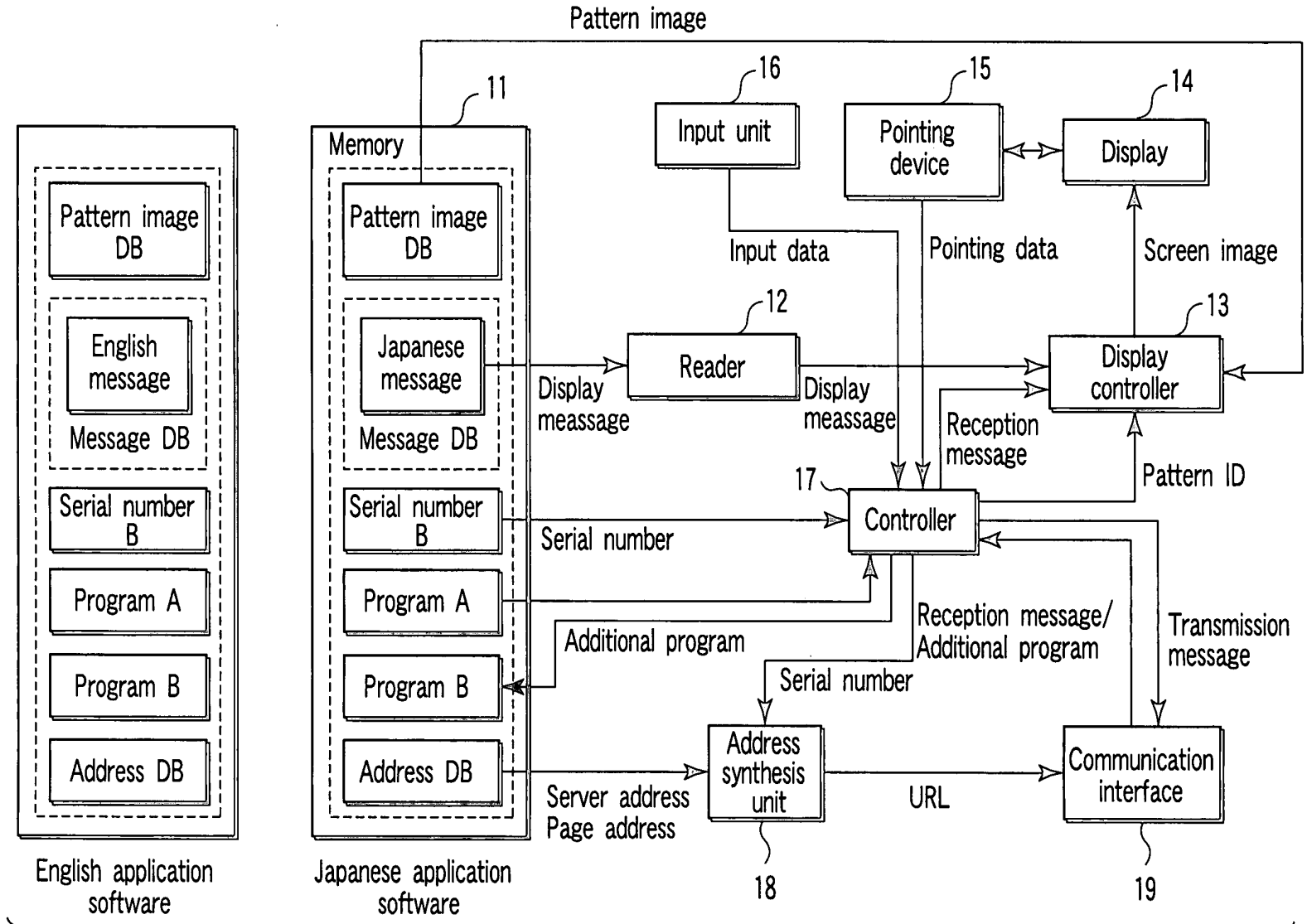
Pattern image
11
16
15
14
Input unit
Pointing device
Display
Memory
Pattern image DB
Input data
Pointing data
Screen image
12
13
Japanese message
Reader
Display controller
Message DB
Display meassage
Display meassage
Reception message
Pattern ID
17
Serial number B
Controller
Serial number
Program A
Reception message/ Additional program
Transmission message
Additional program
Program B
Serial number
Address synthesis unit
Communication interface
Address DB
Server address
Page address
URL
English message
Message DB
Serial number B
Program A
Program B
Address DB
English application software
Japanese application software
18
19

FIG. 3

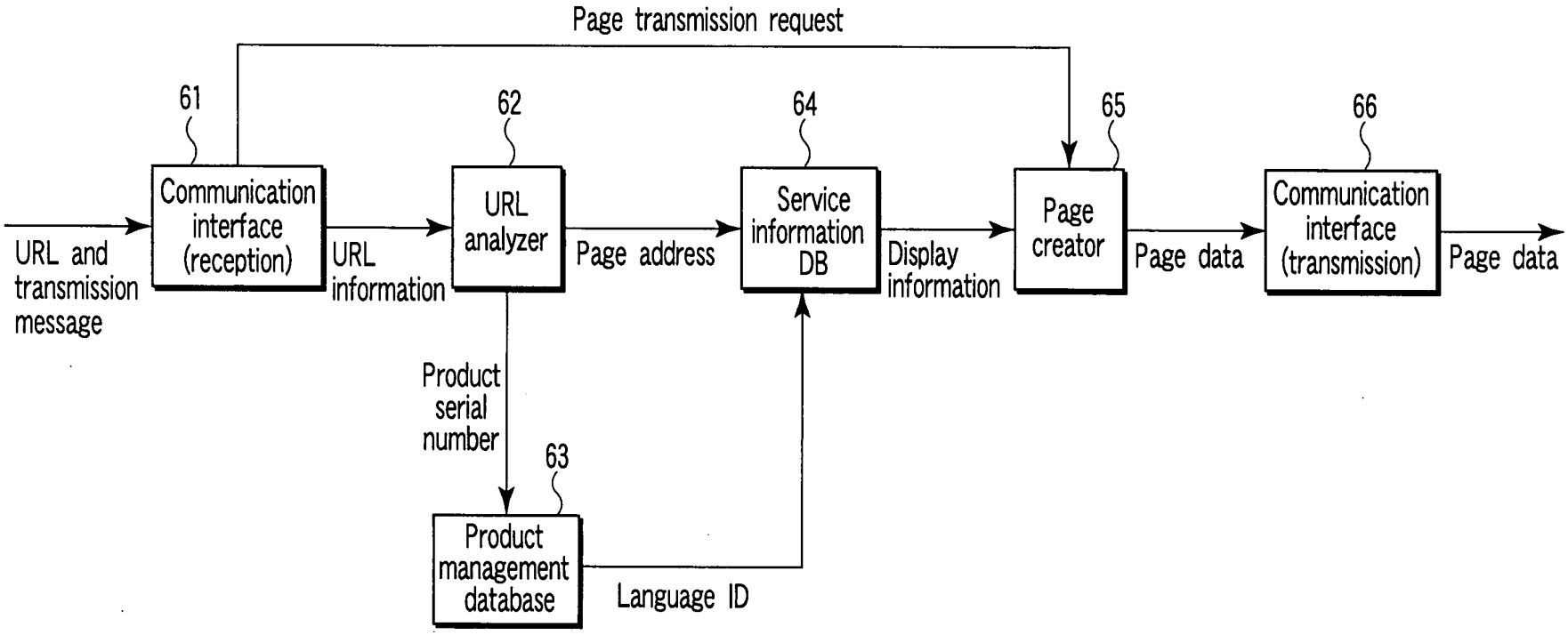
Page transmission request
61
62
64
65
66
Communication interface (reception)
URL analyzer
Service information DB
Page creator
Communication interface (transmission)
URL and transmission message
URL information
Page address
Display information
Page data
Page data
Product serial number
63
Product management database
Language ID

FIG. 4

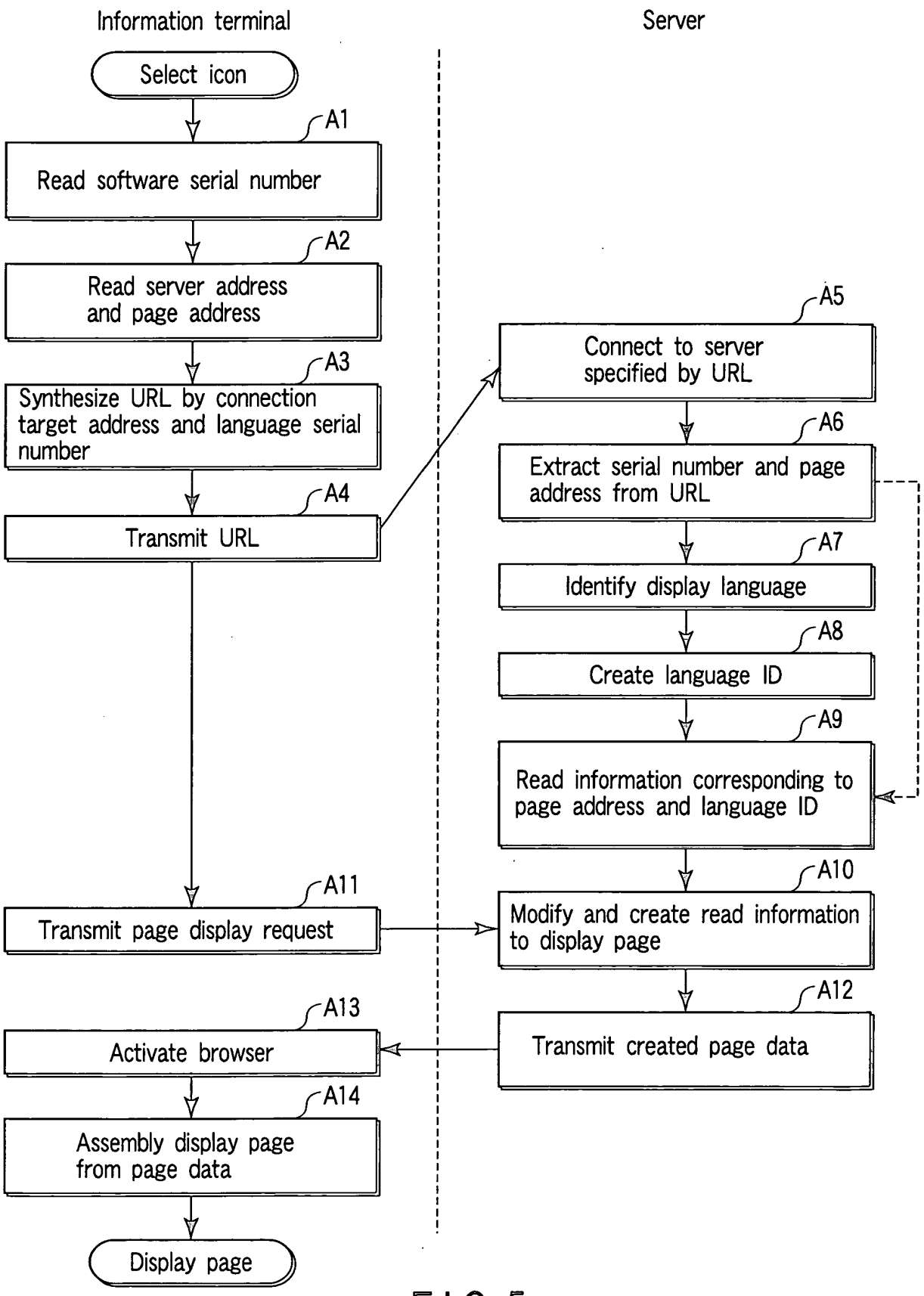
Information terminal
Server
Select icon
A1
Read software serial number
A2
Read server address and page address
A3
Synthesize URL by connection target address and language serial number
A4
Transmit URL
A5
Connect to server specified by URL
A6
Extract serial number and page address from URL
A7
Identify display language
A8
Create language ID
A9
Read information corresponding to page address and language ID
A10
Modify and create read information to display page
A12
Transmit created page data
A11
Transmit page display request
A13
Activate browser
A14
Assembly display page from page data
Display page

FIG. 5

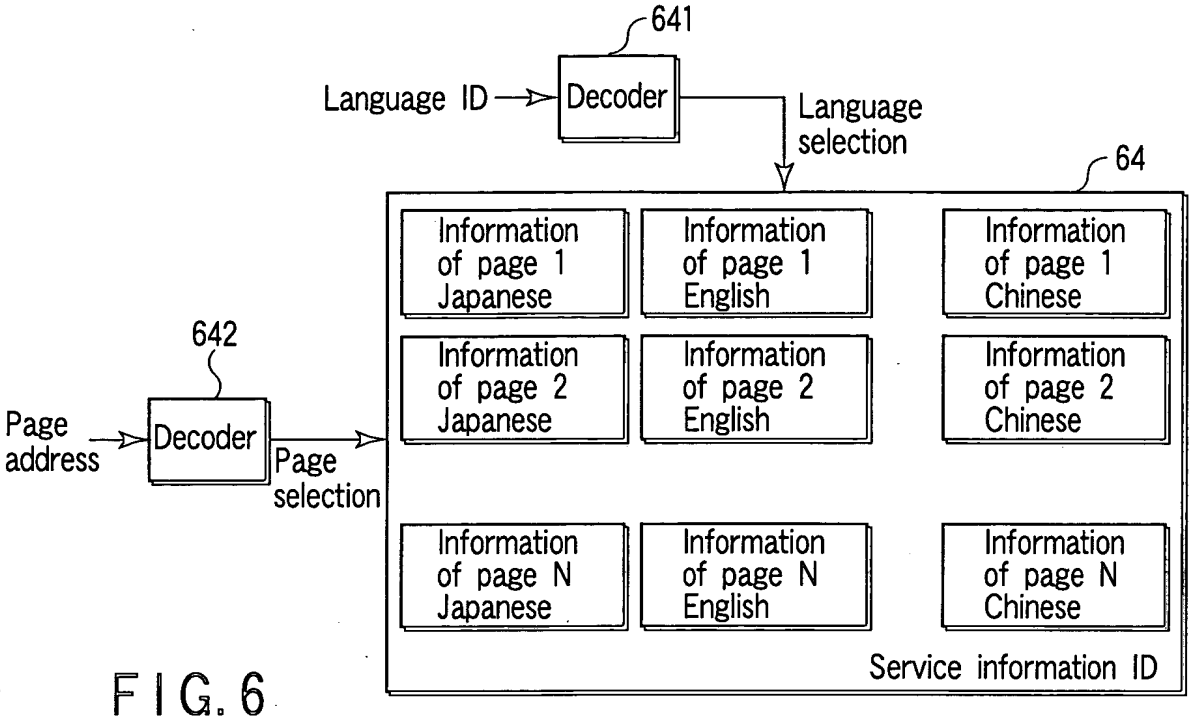
641
Language ID
Decoder
Language selection
64
Information of page 1 Japanese
Information of page 1 English
Information of page 1 Chinese
642
Page address
Decoder
Page selection
Information of page 2 Japanese
Information of page 2 English
Information of page 2 Chinese
Information of page N Japanese
Information of page N English
Information of page N Chinese
Service information ID

FIG. 6

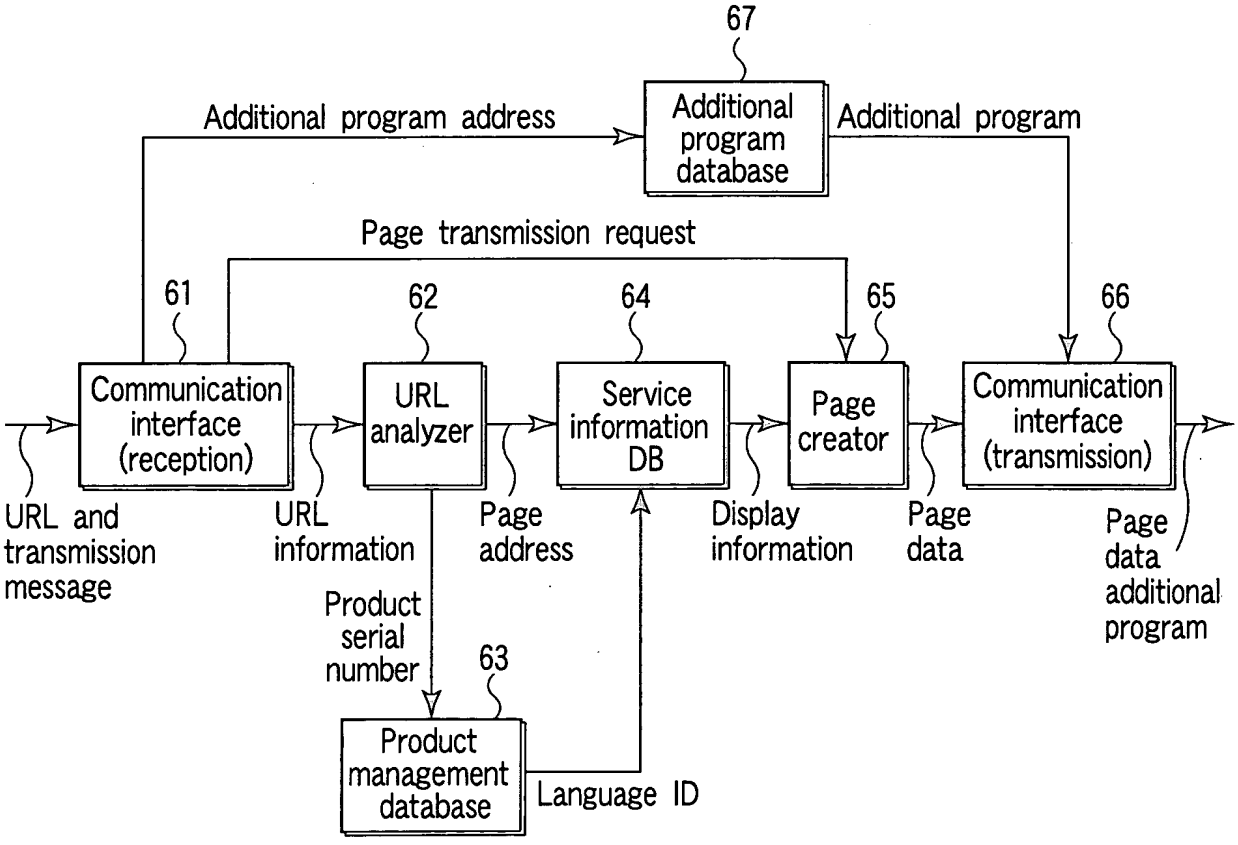
67
Additional program address
Additional program database
Additional program
Page transmission request
61
62
64
65
66
Communication interface (reception)
URL analyzer
Service information DB
Page creator
Communication interface (transmission)
URL and transmission message
URL information
Page address
Display information
Page data
Page data additional program
Product serial number
63
Product management database
Language ID

FIG. 7

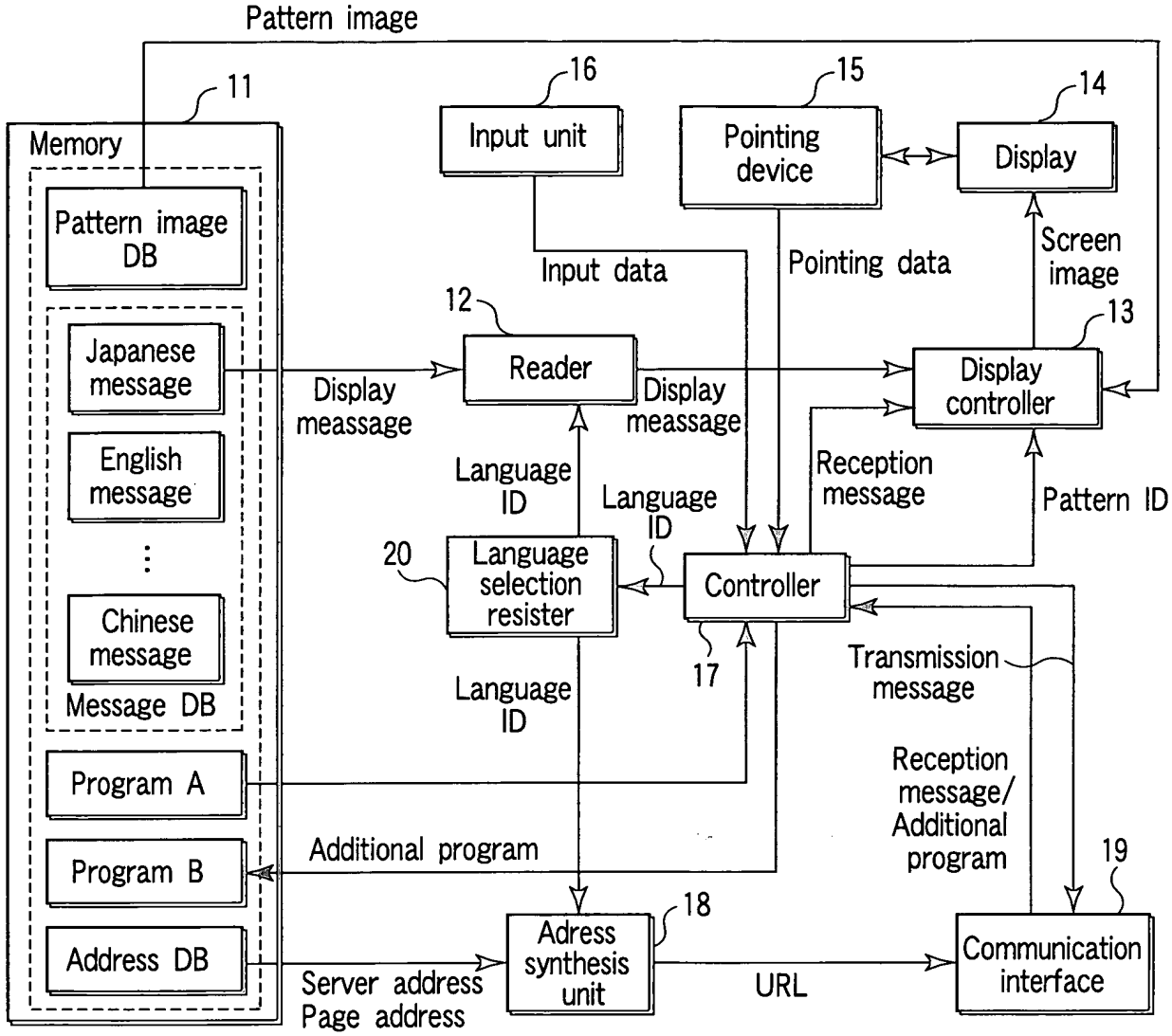
Pattern image
11
Memory
Pattern image DB
Japanese message
English message
Chinese message
Message DB
Program A
Program B
Address DB
16
Input unit
15
Pointing device
14
Display
Input data
Pointing data
Screen image
12
Reader
13
Display controller
Display meassage
Display meassage
Language ID
Language ID
Reception message
Pattern ID
20
Language selection resister
Controller
17
Transmission message
Language ID
Reception message/ Additional program
19
Additional program
18
Adress synthesis unit
Communication interface
Server address
Page address
URL

FIG. 8

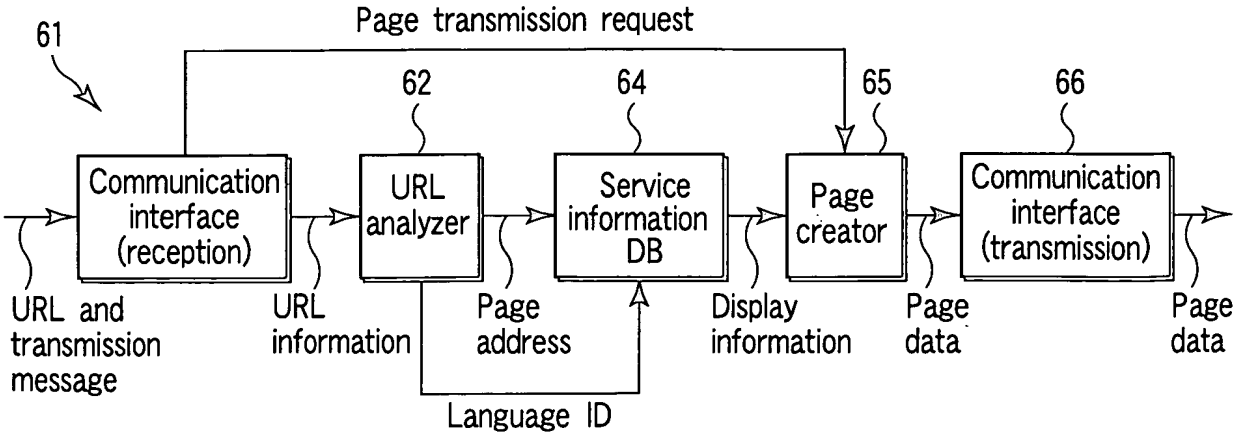
61
Page transmission request
62
64
65
66
Communication interface (reception)
URL analyzer
Service information DB
Page creator
Communication interface (transmission)
URL and transmission message
URL information
Page address
Display information
Page data
Page data
Language ID

FIG. 9

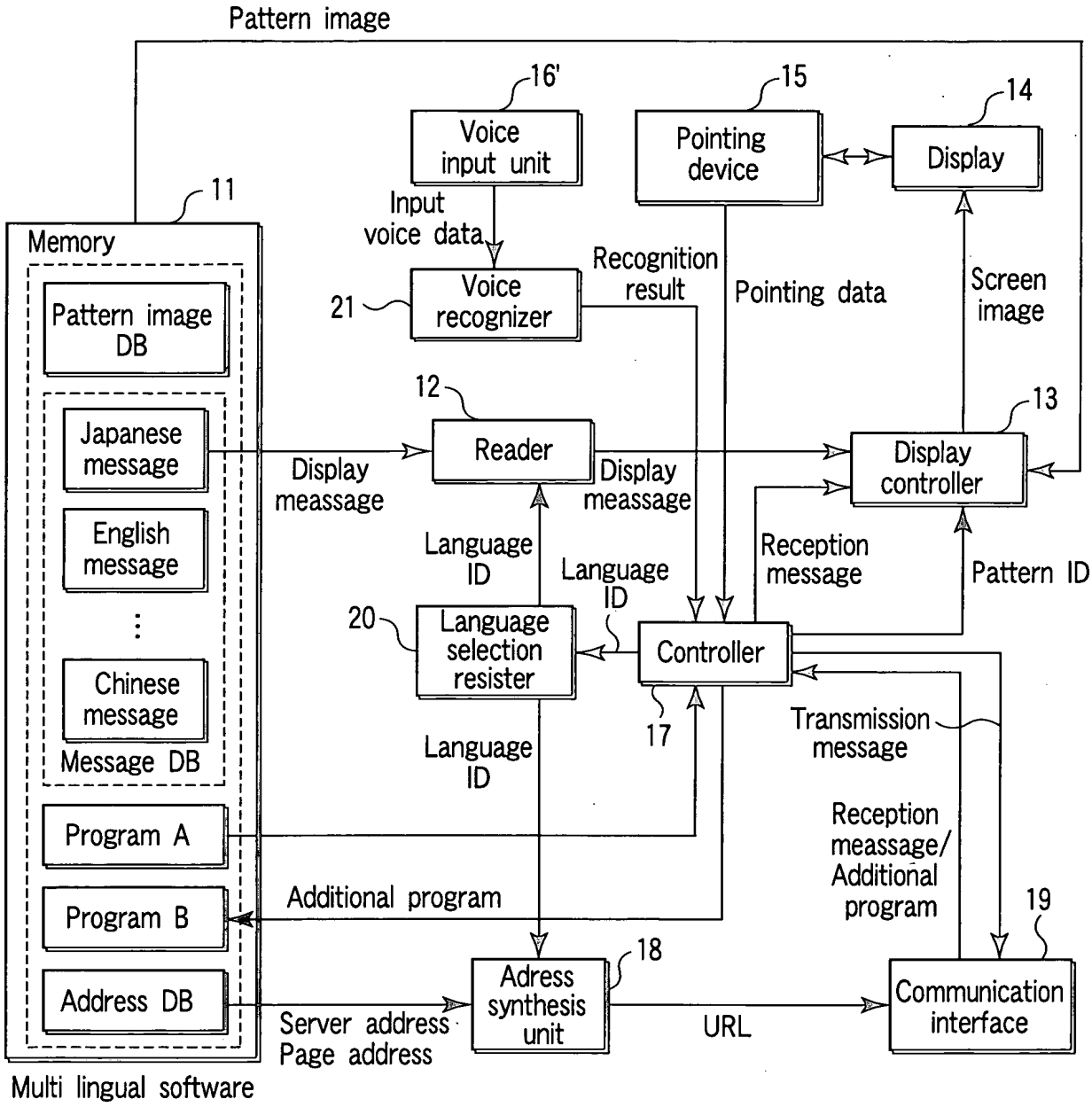
Pattern image
16'
15
14
Voice input unit
Pointing device
Display
11
Input voice data
Recognition result
Pointing data
Screen image
Memory
21
Voice recognizer
Pattern image DB
12
13
Japanese message
Reader
Display controller
Display meassage
Display meassage
English message
Language ID
Language ID
Reception message
Pattern ID
20
Language selection resister
Controller
Chinese message
17
Transmission message
Language ID
Message DB
Reception meassage/ Additional program
Program A
Additional program
19
Program B
18
Address DB
Adress synthesis unit
Communication interface
Server address
Page address
URL
Multi lingual software

FIG. 10

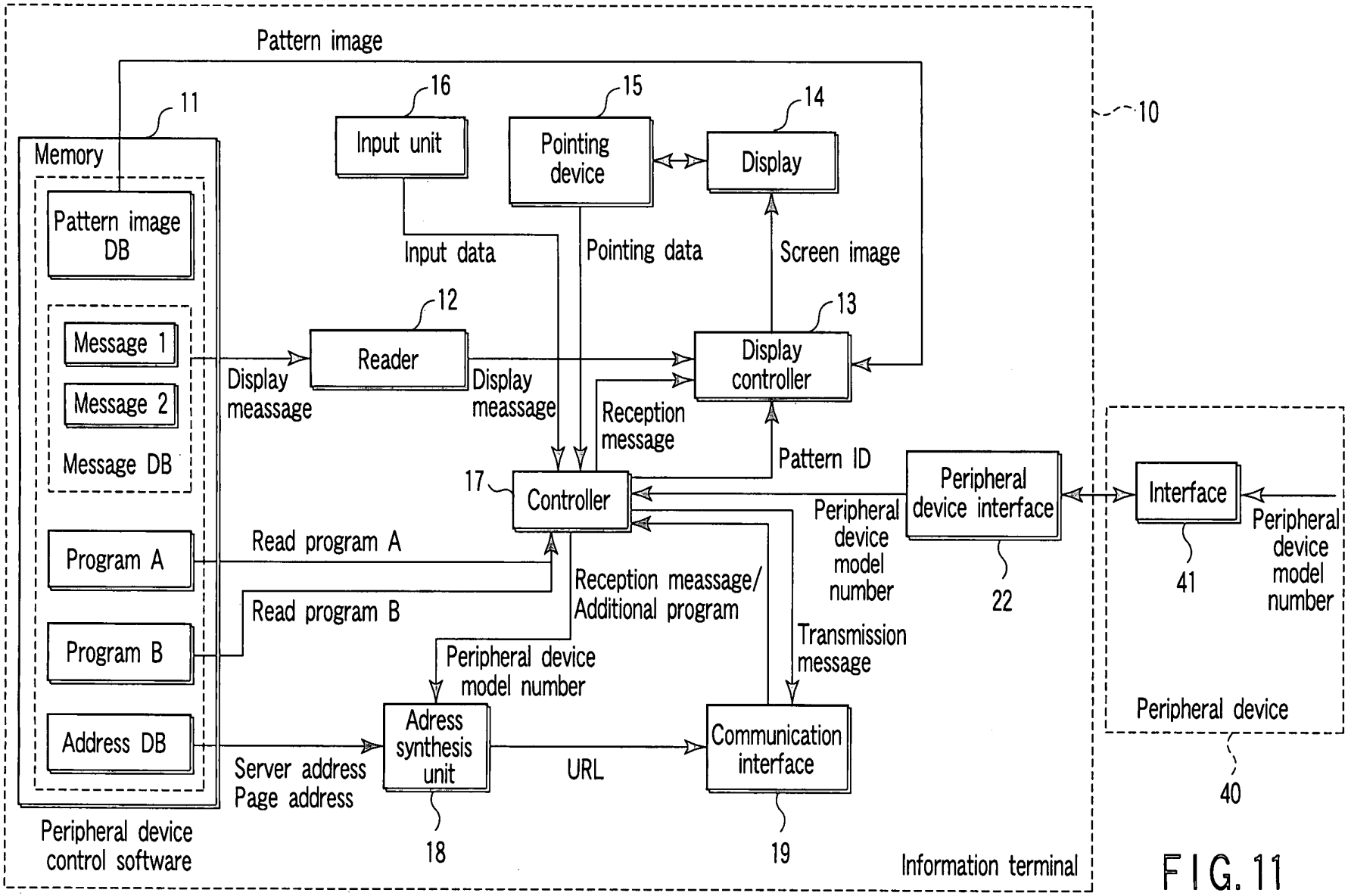
Pattern image
10
11
Memory
16
Input unit
15
Pointing device
14
Display
Pattern image DB
Input data
Pointing data
Screen image
12
13
Message 1
Message 2
Reader
Display controller
Display meassage
Display meassage
Reception message
Message DB
Pattern ID
17
Controller
Peripheral device interface
Interface
Peripheral device model number
Read program A
Peripheral device model number
41
Program A
Reception meassage/ Additional program
Read program B
22
Program B
Transmission message
Peripheral device model number
Peripheral device
Address DB
Adress synthesis unit
Communication interface
Server address
Page address
URL
40
Peripheral device control software
18
19
Information terminal

FIG. 11

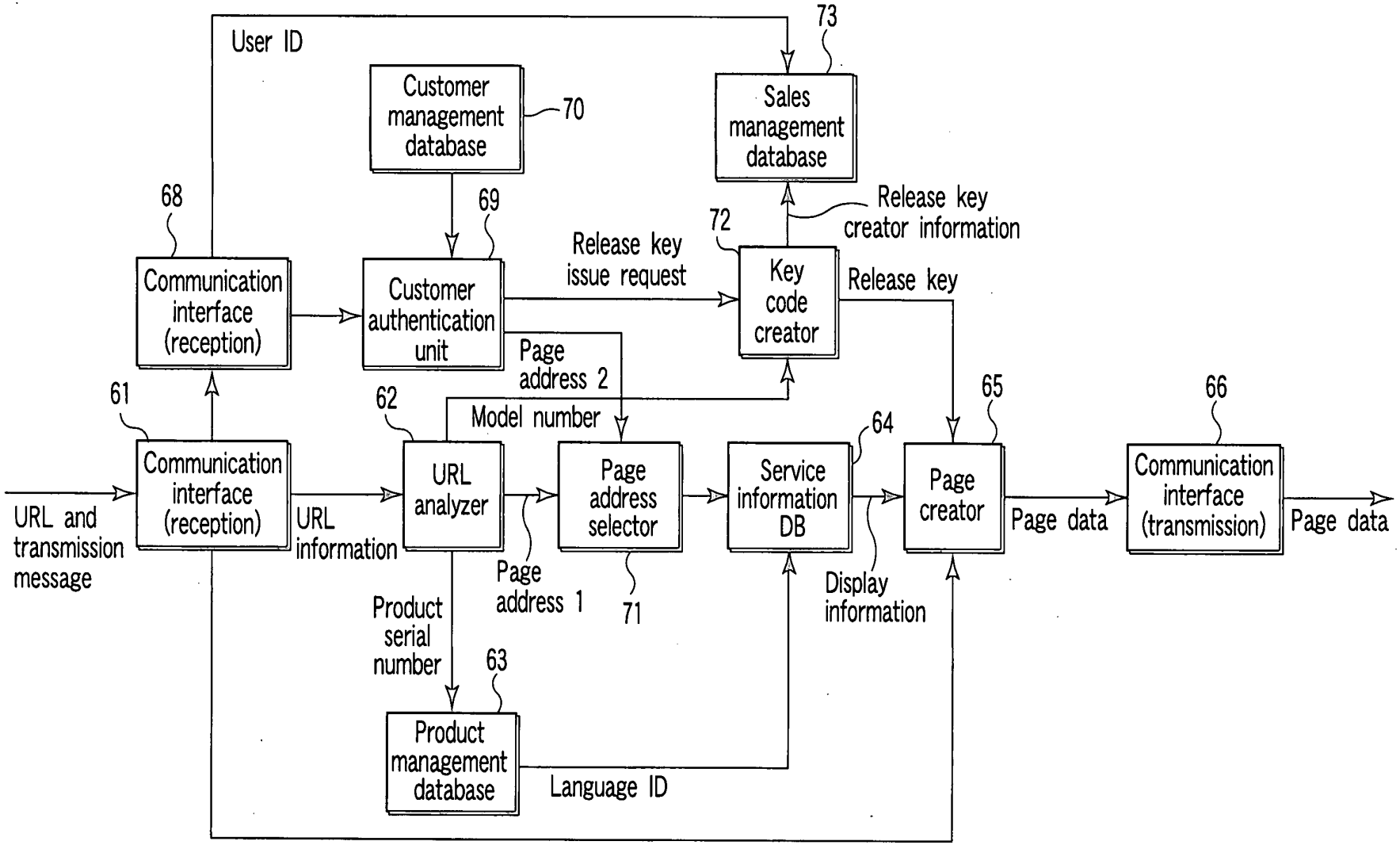
User ID
73
Customer management database
70
Sales management database
68
69
72
Release key creator information
Release key issue request
Communication interface (reception)
Customer authentication unit
Key code creator
Release key
Page address 2
61
62
65
66
Model number
64
Communication interface (reception)
URL analyzer
Page address selector
Service information DB
Page creator
Communication interface (transmission)
URL and transmission message
URL information
Page data
Page data
Page address 1
71
Display information
Product serial number
63
Product management database
Language ID
Page transmission request

FIG. 12

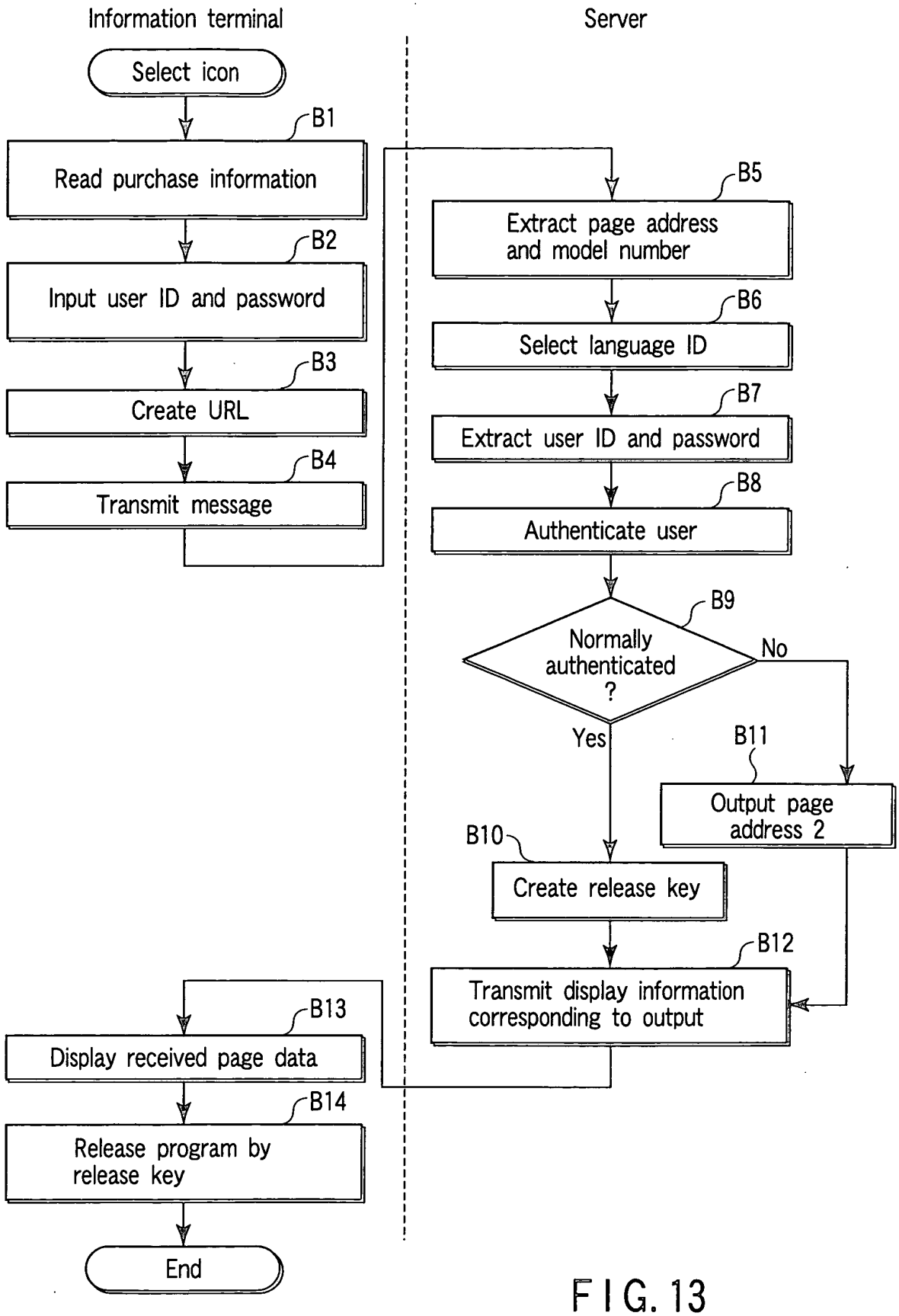
Information terminal
Server
Select icon
B1
Read purchase information
B2
Input user ID and password
B3
Create URL
B4
Transmit message
B5
Extract page address and model number
B6
Select language ID
B7
Extract user ID and password
B8
Authenticate user
B9
Normally authenticated ?
No
Yes
B11
Output page address 2
B10
Create release key
B12
Transmit display information corresponding to output
B13
Display received page data
B14
Release program by release key
End

FIG. 13

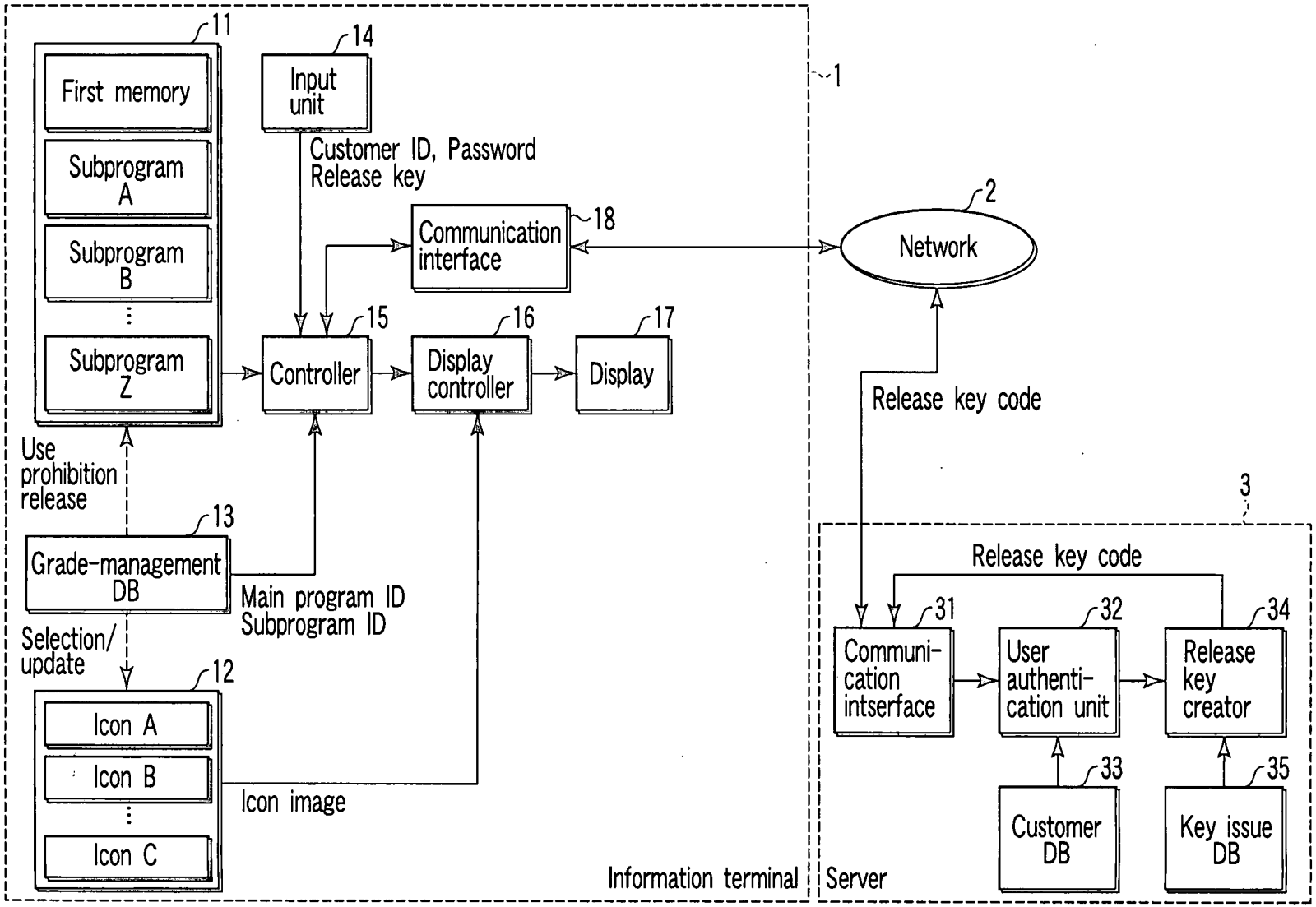
11
First memory
Subprogram A
Subprogram B
Subprogram Z
14
Input unit
Customer ID, Password
Release key
1
2
Network
18
Communication interface
15
16
17
Controller
Display controller
Display
Release key code
Use prohibition release
3
13
Grade-management DB
Main program ID
Subprogram ID
Release key code
Selection/ update
31
32
34
Communi-cation intserface
User authenti-cation unit
Release key creator
12
Icon A
Icon B
Icon C
Icon image
33
35
Customer DB
Key issue DB
Information terminal
Server

FIG. 14

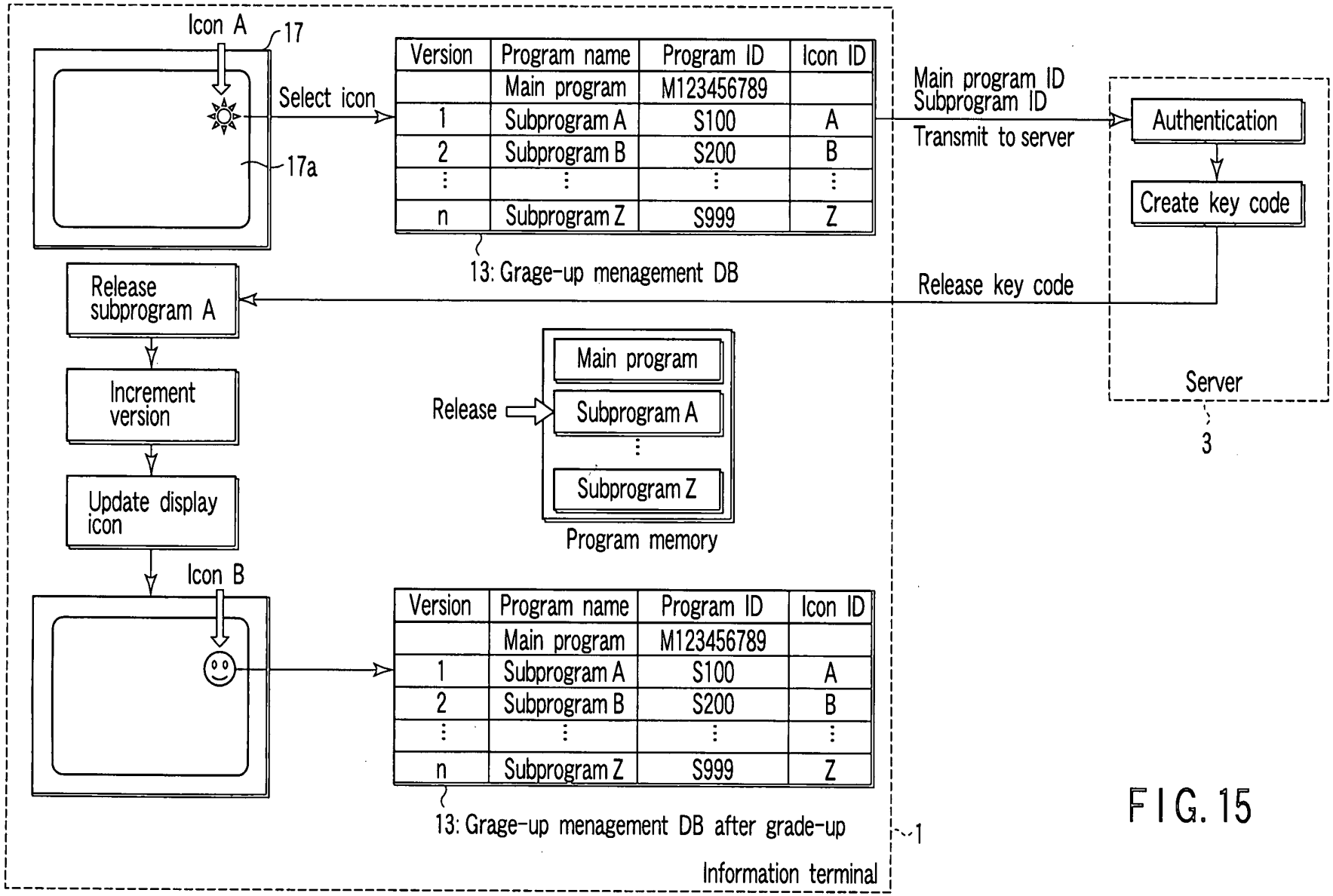
Icon A
17
17a
Select icon
Version
Program name
Program ID
Icon ID
Main program
M123456789
1
Subprogram A
S100
A
2
Subprogram B
S200
B
n
Subprogram Z
S999
Z
13: Grage-up menagement DB
Main program ID
Subprogram ID
Transmit to server
Authentication
Create key code
Release key code
Release subprogram A
Increment version
Update display icon
Release
Main program
Subprogram A
Subprogram Z
Program memory
Server
3
Icon B
13: Grage-up menagement DB after grade-up
1
Information terminal

FIG. 15

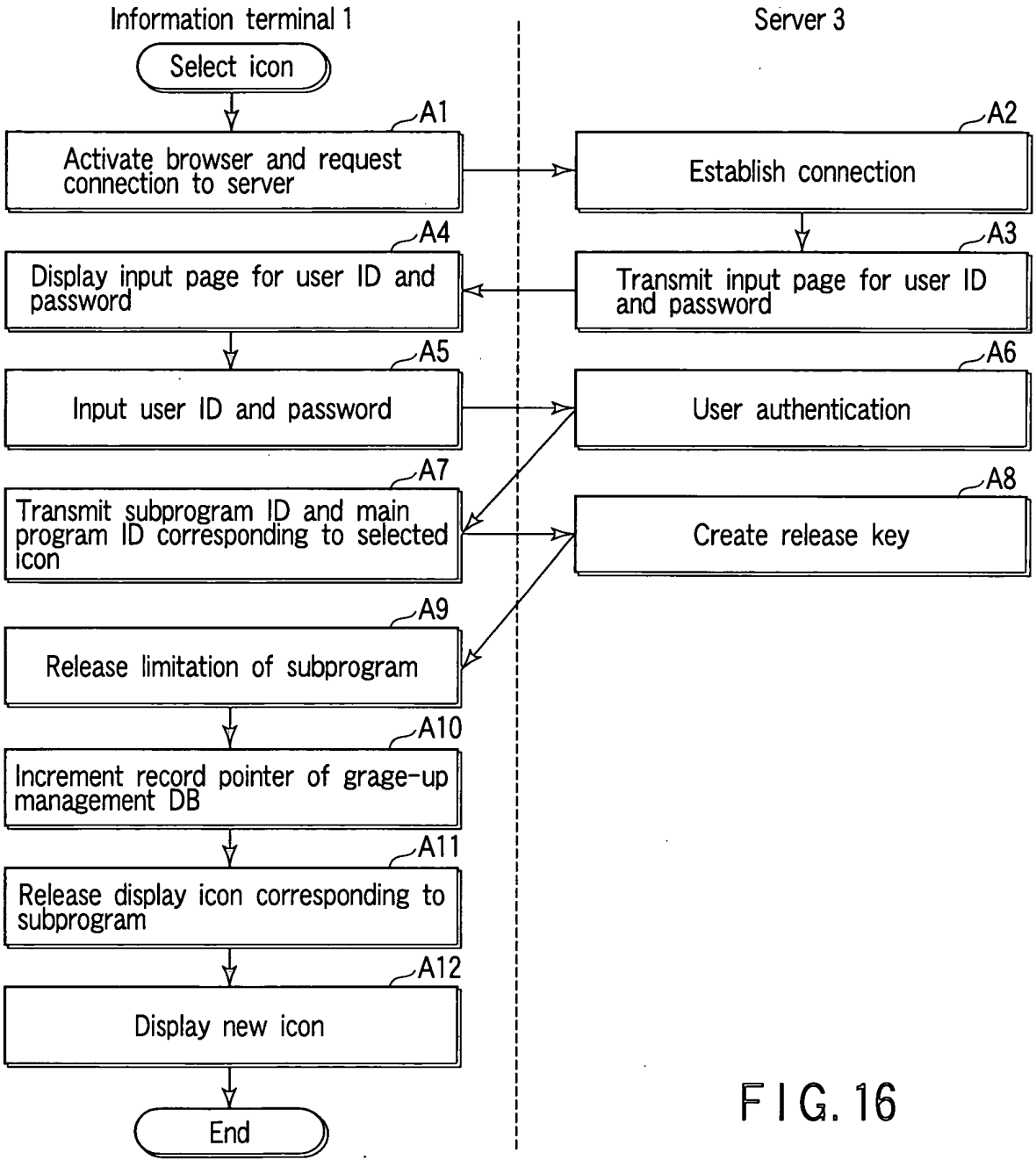
Information terminal 1
Server 3
Select icon
A1
Activate browser and request connection to server
A2
Establish connection
A3
Transmit input page for user ID and password
A4
Display input page for user ID and password
A5
Input user ID and password
A6
User authentication
A7
Transmit subprogram ID and main program ID corresponding to selected icon
A8
Create release key
A9
Release limitation of subprogram
A10
Increment record pointer of grage-up management DB
A11
Release display icon corresponding to subprogram
A12
Display new icon
End

FIG. 16

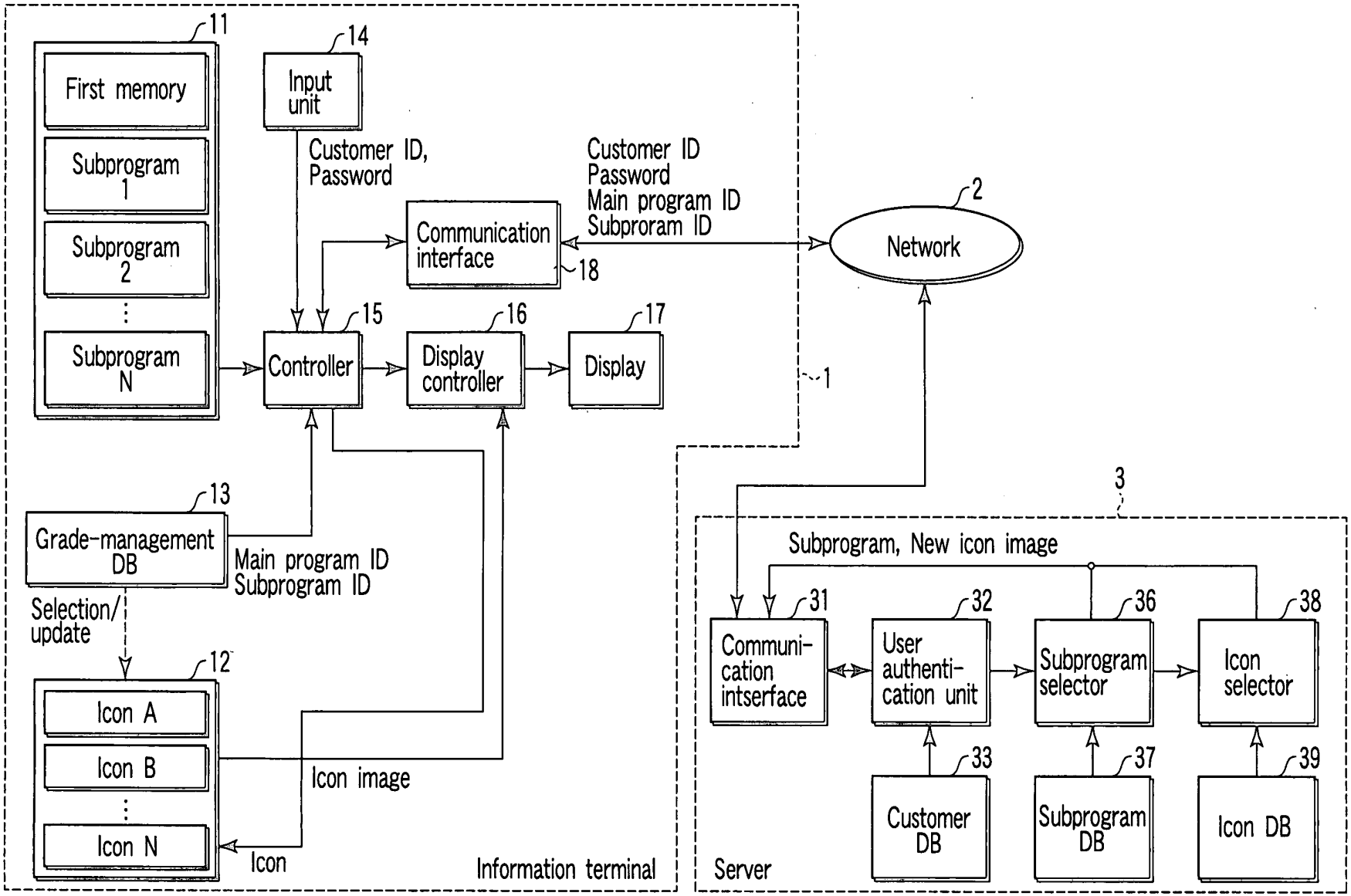
11
First memory
Subprogram 1
Subprogram 2
Subprogram N
14
Input unit
Customer ID, Password
Customer ID
Password
Main program ID
Subproram ID
Communication interface
18
2
Network
15
Controller
16
Display controller
17
Display
1
13
Grade-management DB
Main program ID
Subprogram ID
Selection/ update
12
Icon A
Icon B
Icon N
Icon image
Icon
Information terminal
3
Subprogram, New icon image
31
Communi-cation intserface
32
User authenti-cation unit
36
Subprogram selector
38
Icon selector
33
Customer DB
37
Subprogram DB
39
Icon DB
Server

FIG. 17

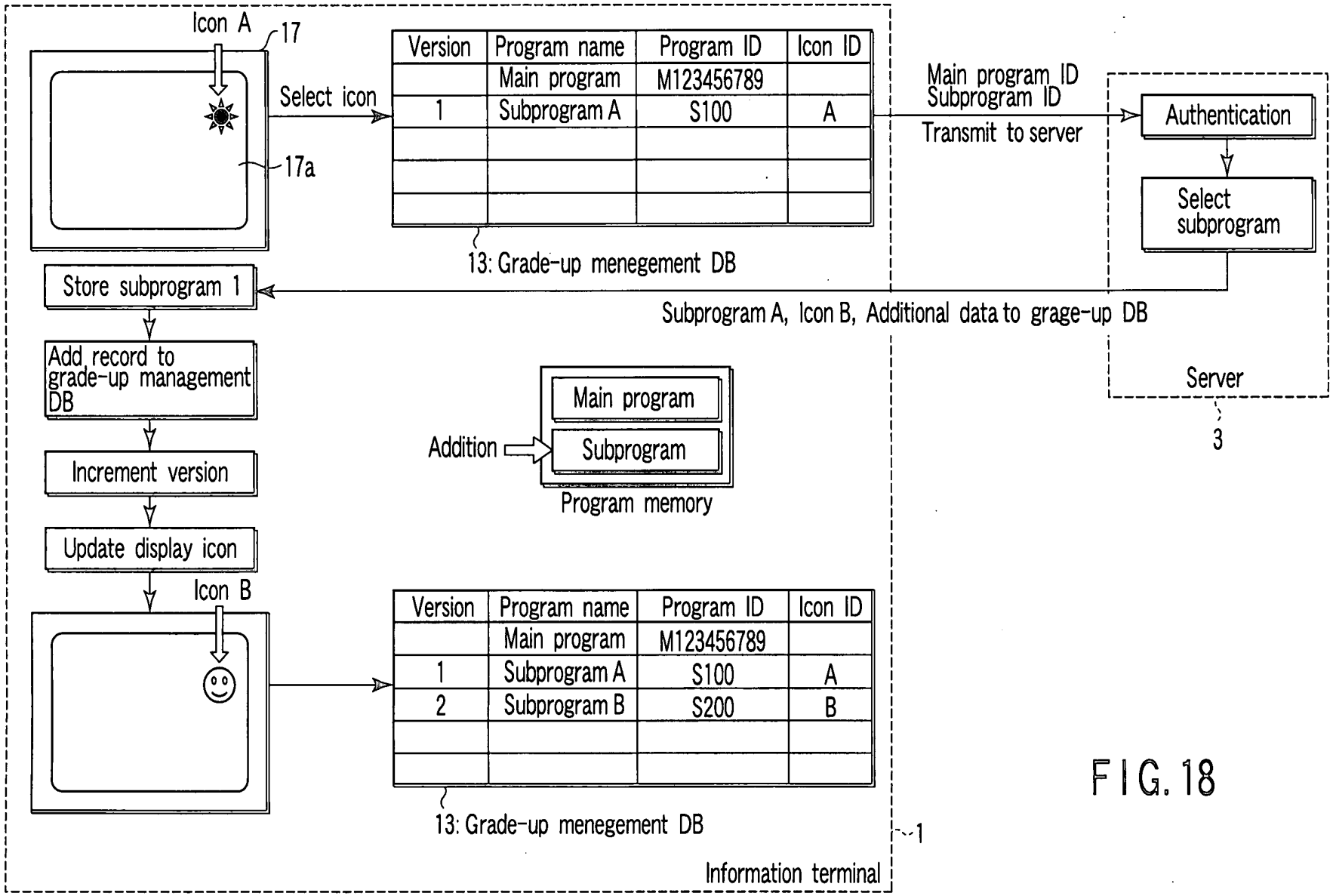
Icon A
17
17a
Select icon
Version
Program name
Program ID
Icon ID
Main program
M123456789
1
Subprogram A
S100
A
13: Grade-up menegement DB
Main program ID
Subprogram ID
Transmit to server
Authentication
Select subprogram
Server
3
Store subprogram 1
Subprogram A, Icon B, Additional data to grage-up DB
Add record to grade-up management DB
Increment version
Update display icon
Addition
Main program
Subprogram
Program memory
Icon B
2
Subprogram B
S200
B
13: Grade-up menegement DB
1
Information terminal

FIG. 18

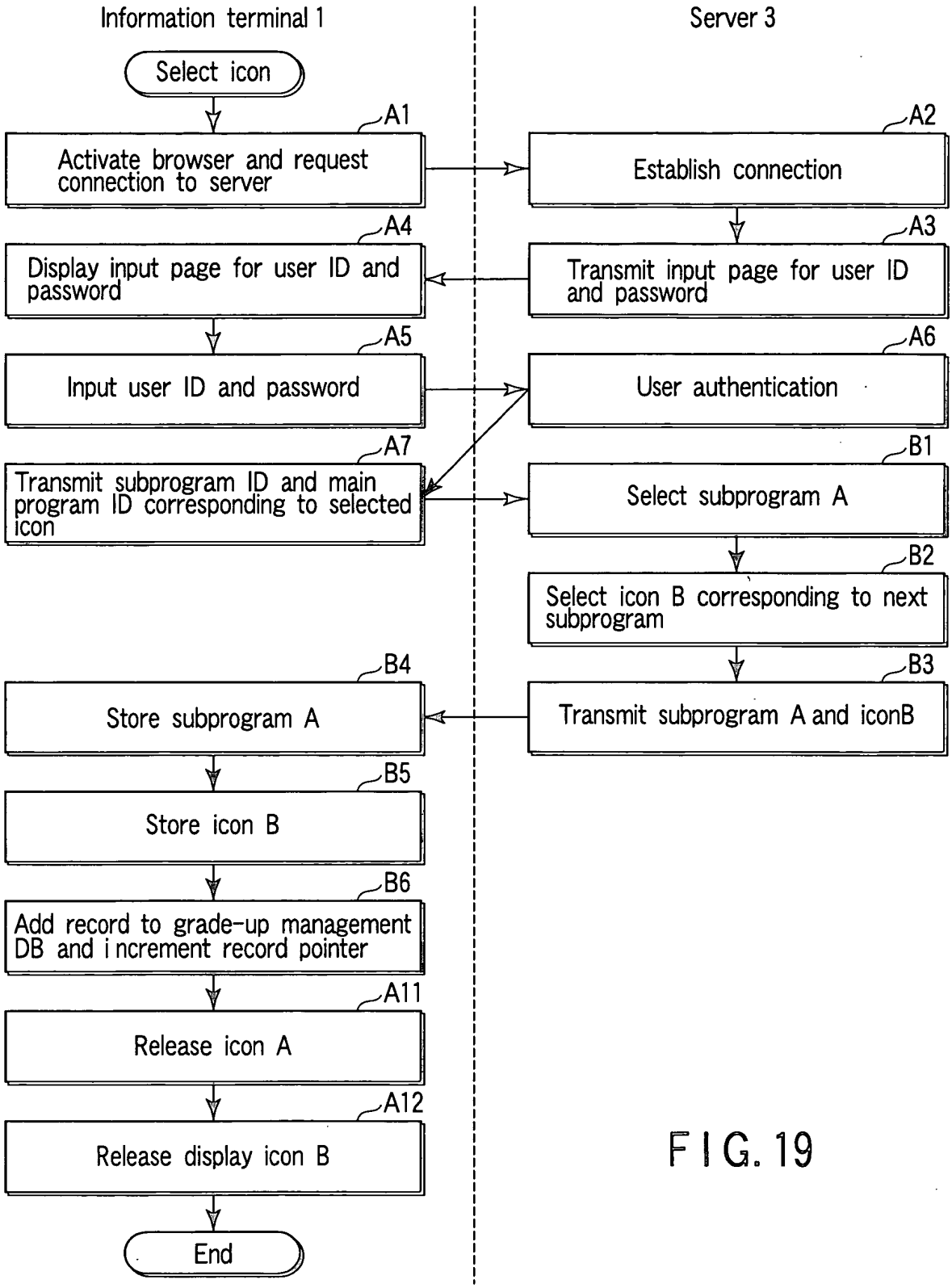
Information terminal 1
Server 3
Select icon
A1
Activate browser and request connection to server
A2
Establish connection
A4
Display input page for user ID and password
A3
Transmit input page for user ID and password
A5
Input user ID and password
A6
User authentication
A7
Transmit subprogram ID and main program ID corresponding to selected icon
B1
Select subprogram A
B2
Select icon B corresponding to next subprogram
B4
Store subprogram A
B3
Transmit subprogram A and iconB
B5
Store icon B
B6
Add record to grade-up management DB and increment record pointer
A11
Release icon A
A12
Release display icon B
End

FIG. 19

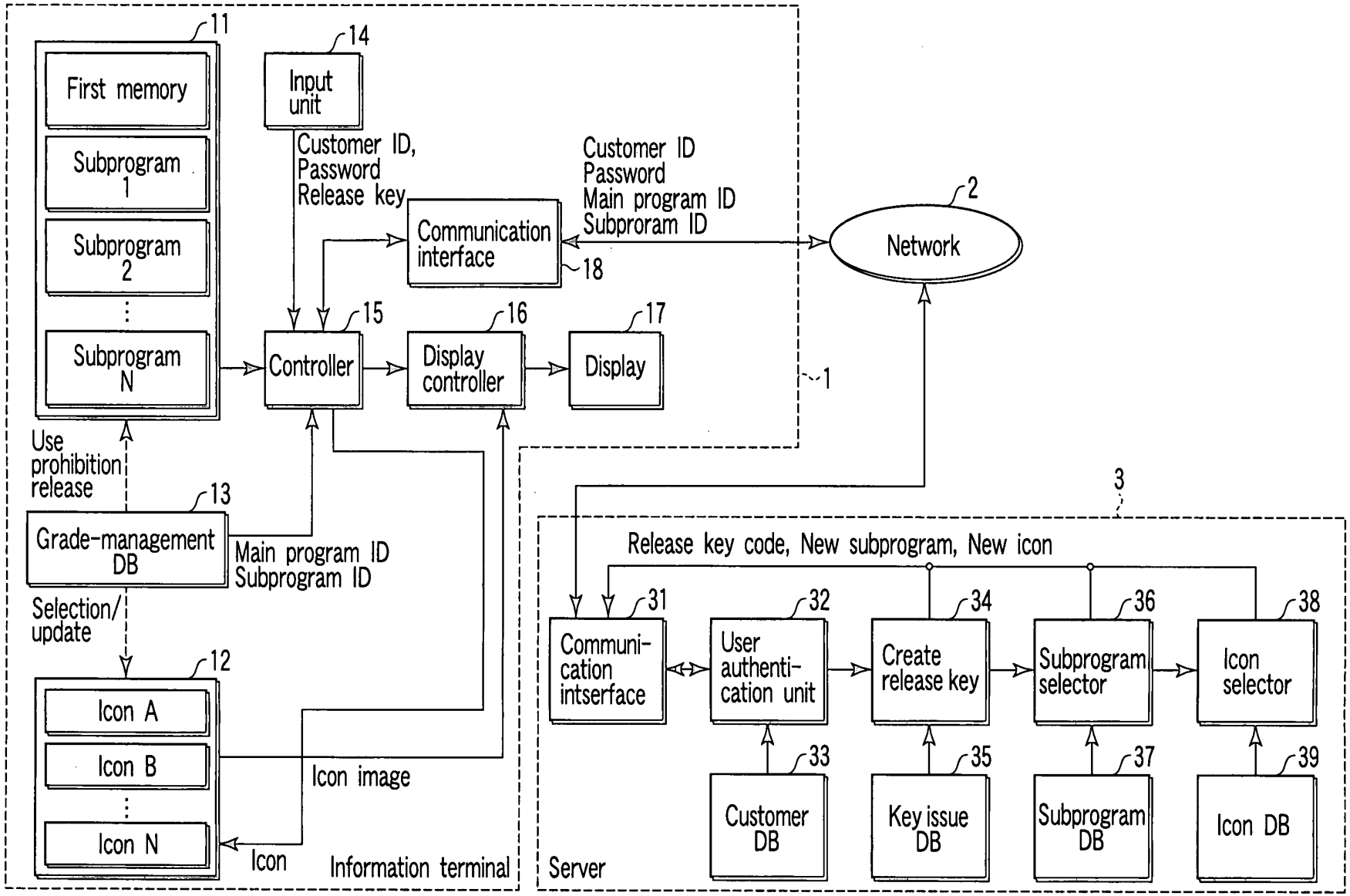
11
First memory
Subprogram 1
Subprogram 2
Subprogram N
14
Input unit
Customer ID,
Password
Release key
Communication interface
18
Customer ID
Password
Main program ID
Subproram ID
2
Network
15
Controller
16
Display controller
17
Display
1
Use prohibition release
13
Grade-management DB
Main program ID
Subprogram ID
Selection/ update
12
Icon A
Icon B
Icon N
Icon image
Icon
Information terminal
3
Release key code, New subprogram, New icon
31
Communi-cation intserface
32
User authenti-cation unit
34
Create release key
36
Subprogram selector
38
Icon selector
33
Customer DB
35
Key issue DB
37
Subprogram DB
39
Icon DB
Server

FIG. 20

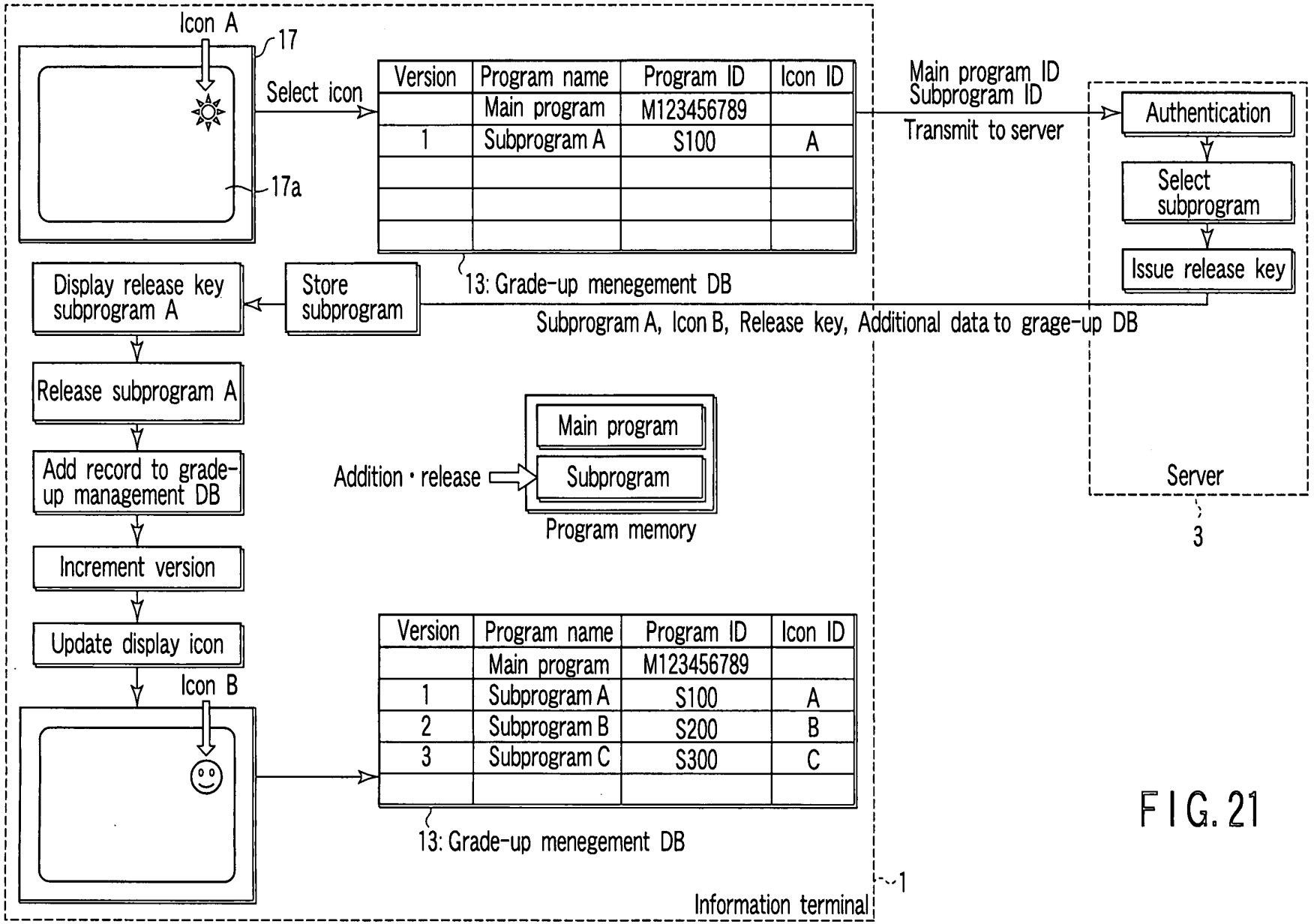
Icon A
17
17a
Select icon
Version
Program name
Program ID
Icon ID
Main program
M123456789
1
Subprogram A
S100
A
13: Grade-up menegement DB
Main program ID
Subprogram ID
Transmit to server
Authentication
Select subprogram
Issue release key
Server
3
Display release key subprogram A
Store subprogram
Subprogram A, Icon B, Release key, Additional data to grage-up DB
Release subprogram A
Add record to grade-up management DB
Increment version
Update display icon
Addition・release
Main program
Subprogram
Program memory
Icon B
2
Subprogram B
S200
B
3
Subprogram C
S300
C
13: Grade-up menegement DB
1
Information terminal

FIG. 21

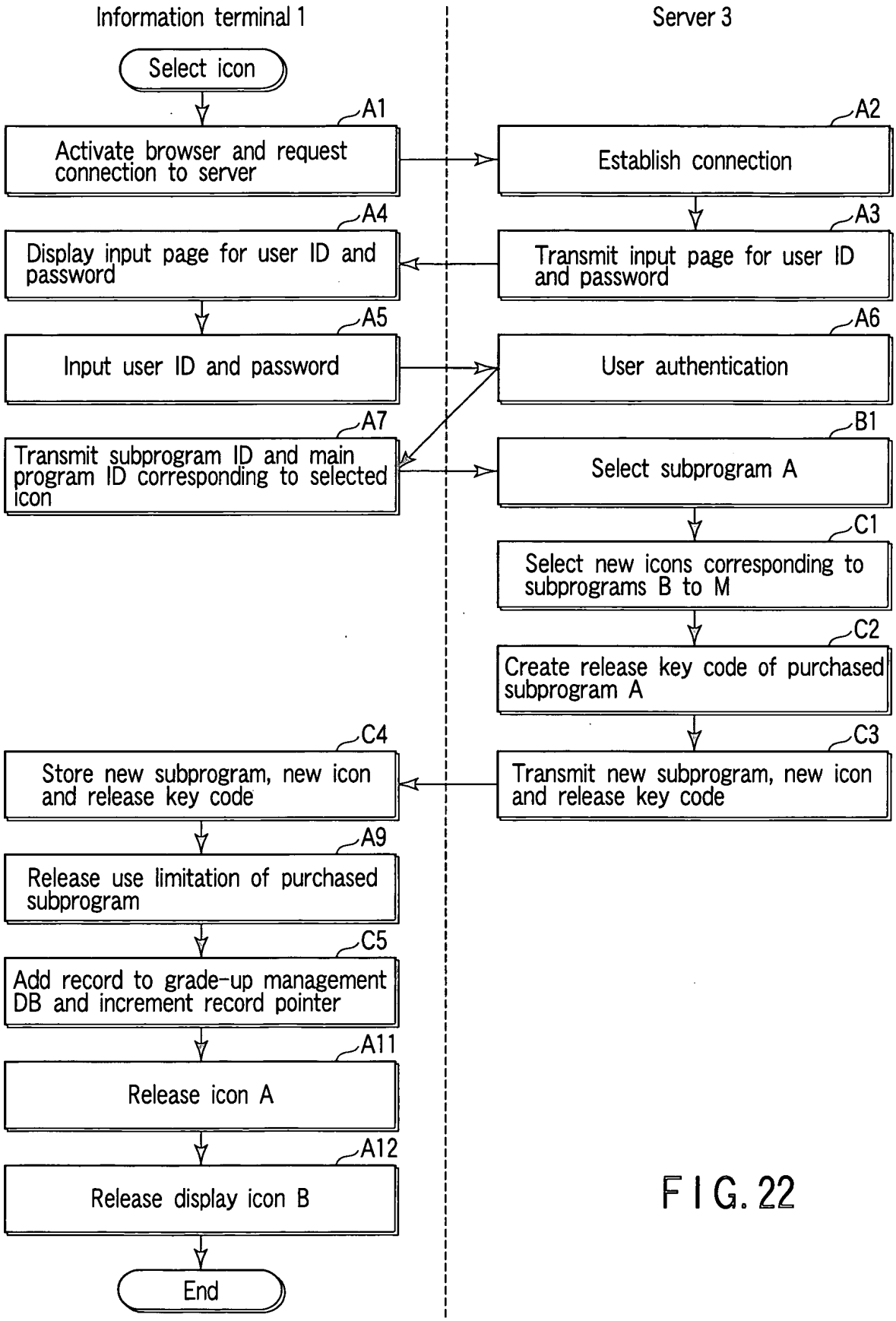
Information terminal 1
Server 3
Select icon
A1
Activate browser and request connection to server
A2
Establish connection
A4
Display input page for user ID and password
A3
Transmit input page for user ID and password
A5
Input user ID and password
A6
User authentication
A7
Transmit subprogram ID and main program ID corresponding to selected icon
B1
Select subprogram A
C1
Select new icons corresponding to subprograms B to M
C2
Create release key code of purchased subprogram A
C4
Store new subprogram, new icon and release key code
C3
Transmit new subprogram, new icon and release key code
A9
Release use limitation of purchased subprogram
C5
Add record to grade-up management DB and increment record pointer
A11
Release icon A
A12
Release display icon B
End

FIG. 22

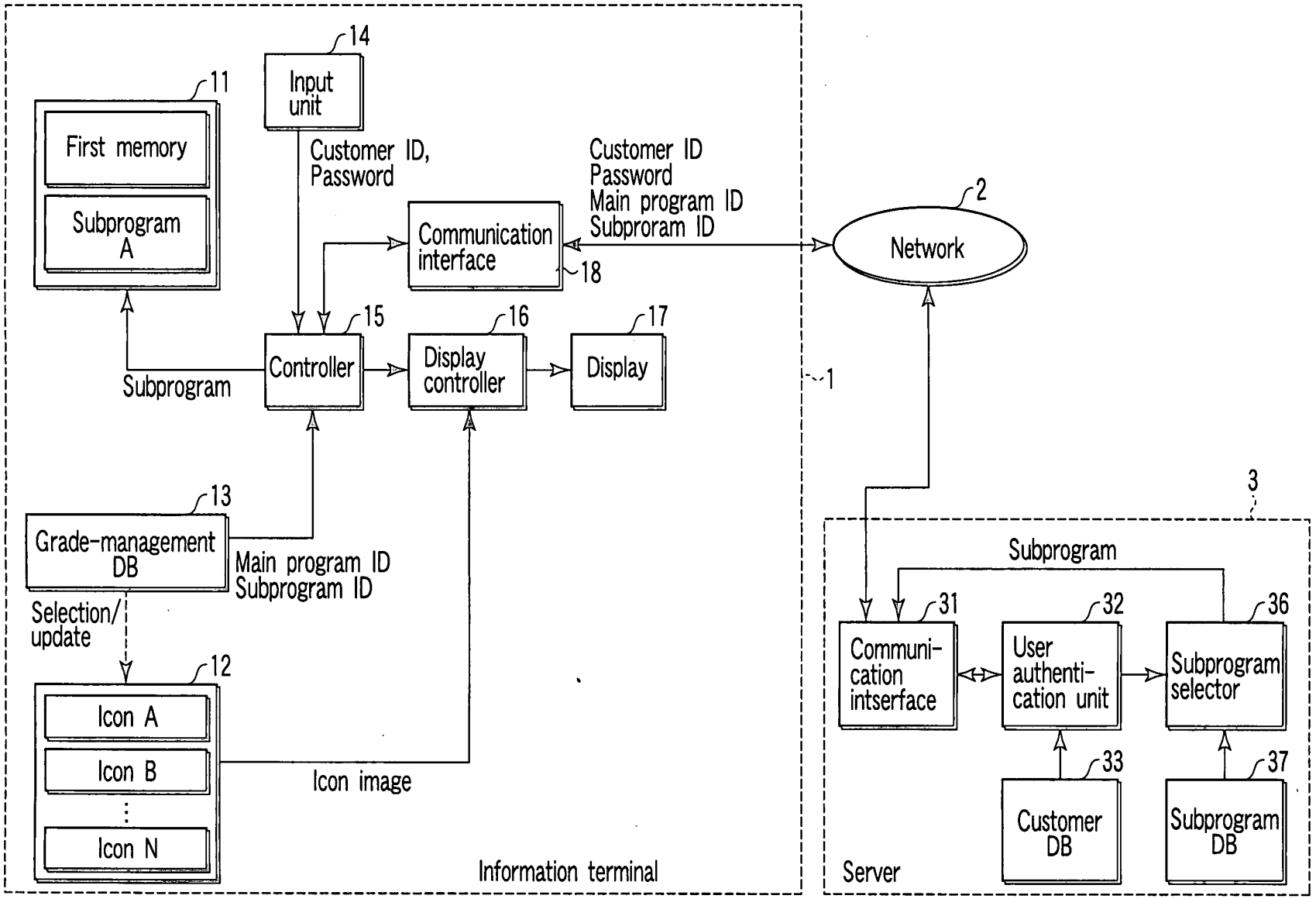
14
Input unit
11
First memory
Subprogram A
Customer ID, Password
Customer ID
Password
Main program ID
Subproram ID
Communication interface
18
2
Network
15
16
17
Controller
Display controller
Display
Subprogram
1
13
Grade-management DB
Main program ID
Subprogram ID
Selection/ update
12
Icon A
Icon B
Icon N
Icon image
Information terminal
3
Subprogram
31
32
36
Communi-cation intserface
User authenti-cation unit
Subprogram selector
33
37
Customer DB
Subprogram DB
Server

FIG. 23

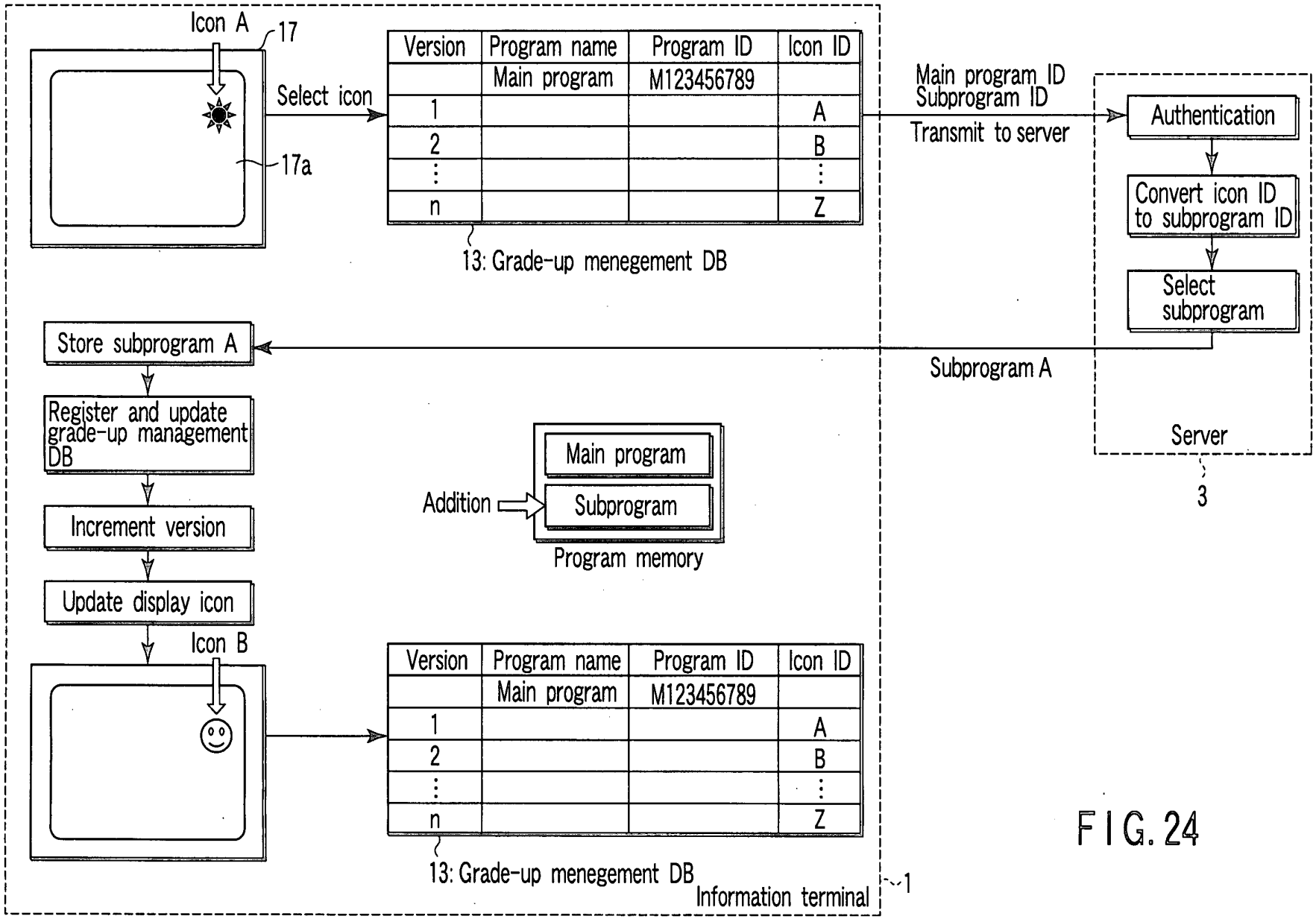
Icon A
17
17a
Select icon
Version
Program name
Program ID
Icon ID
Main program
M123456789
1
2
n
A
B
Z
13: Grade-up menegement DB
Main program ID
Subprogram ID
Transmit to server
Authentication
Convert icon ID to subprogram ID
Select subprogram
Server
3
Store subprogram A
Subprogram A
Register and update grade-up management DB
Increment version
Update display icon
Addition
Main program
Subprogram
Program memory
Icon B
13: Grade-up menegement DB
Information terminal
1

FIG. 24

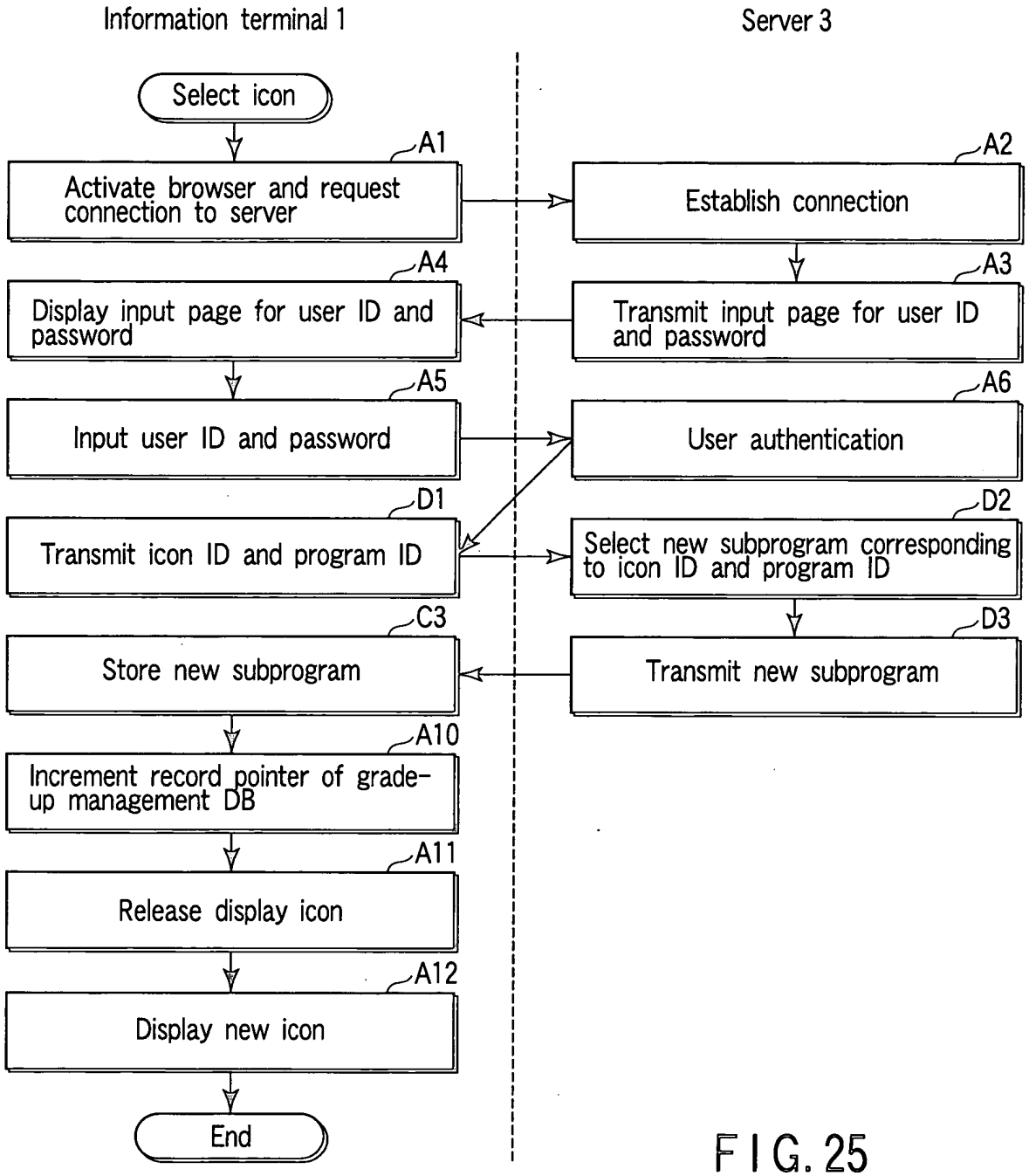
Information terminal 1
Server 3
Select icon
A1
Activate browser and request connection to server
A2
Establish connection
A4
Display input page for user ID and password
A3
Transmit input page for user ID and password
A5
Input user ID and password
A6
User authentication
D1
Transmit icon ID and program ID
D2
Select new subprogram corresponding to icon ID and program ID
C3
Store new subprogram
D3
Transmit new subprogram
A10
Increment record pointer of grade-up management DB
A11
Release display icon
A12
Display new icon
End

FIG. 25

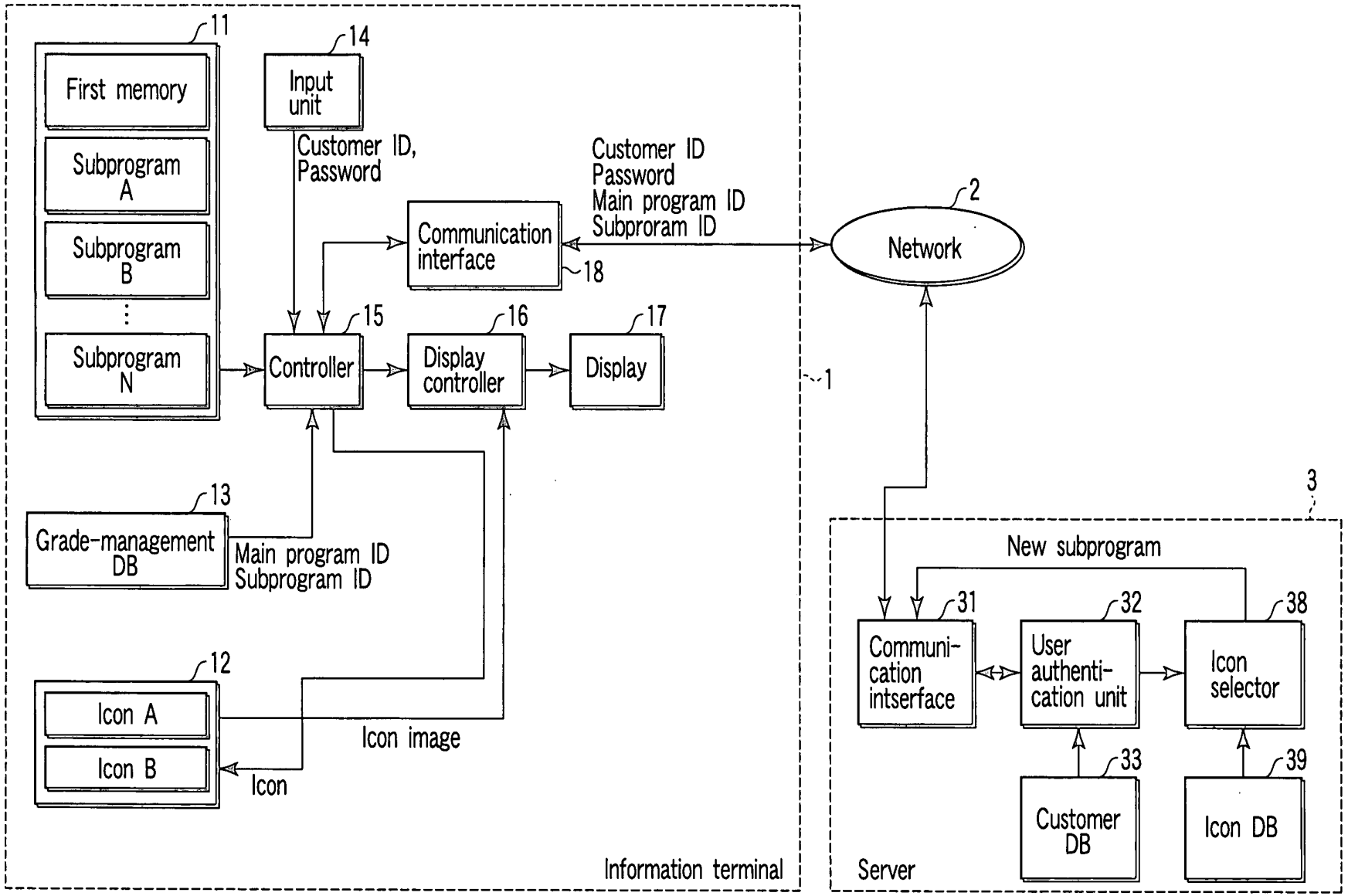
11
First memory
Subprogram A
Subprogram B
Subprogram N
14
Input unit
Customer ID, Password
Communication interface
18
Customer ID
Password
Main program ID
Subproram ID
2
Network
15
Controller
16
Display controller
17
Display
1
13
Grade-management DB
Main program ID
Subprogram ID
12
Icon A
Icon B
Icon
Icon image
Information terminal
3
New subprogram
31
Communi-cation intserface
32
User authenti-cation unit
38
Icon selector
33
Customer DB
39
Icon DB
Server

FIG. 26

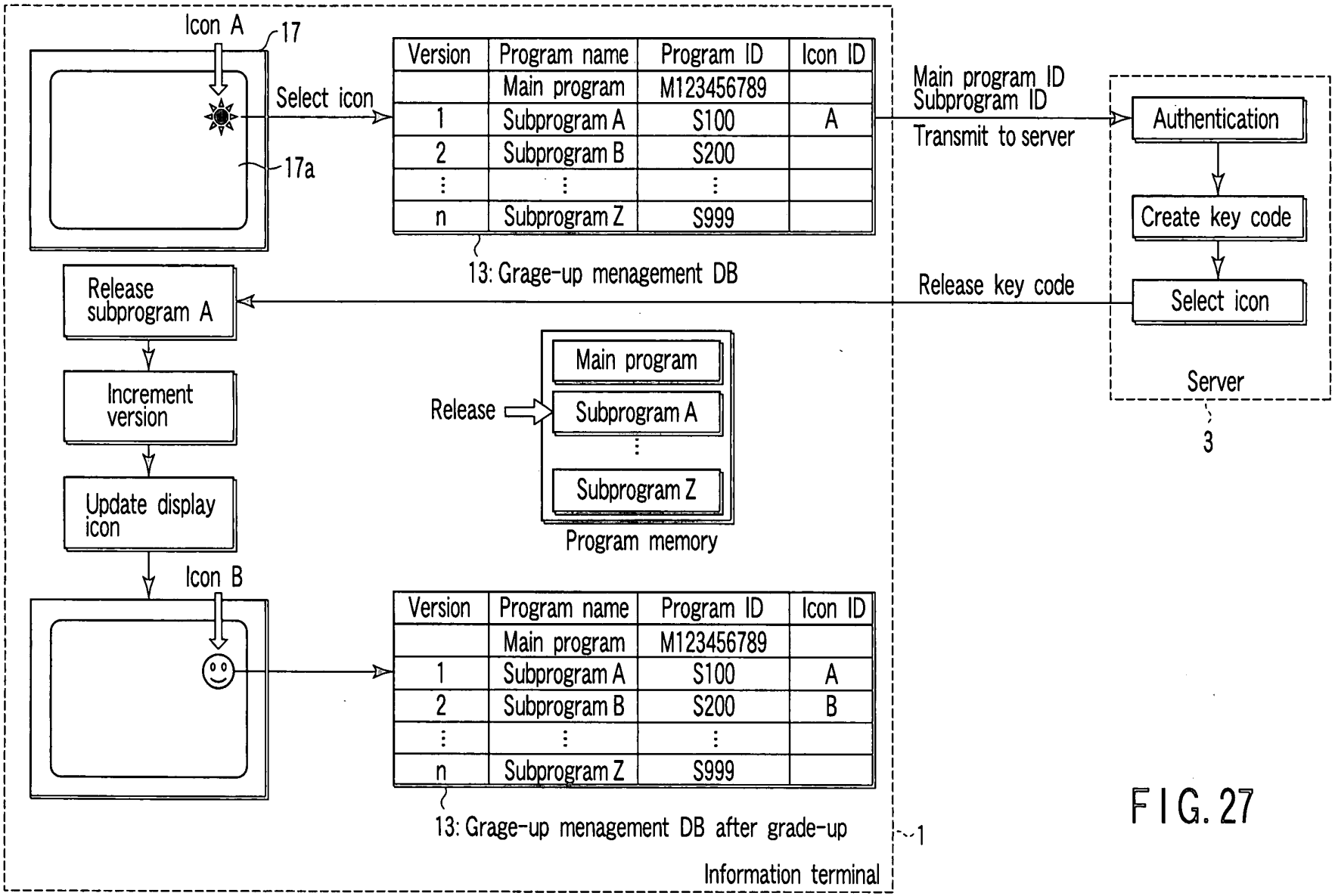
Icon A
17
17a
Select icon
Version
Program name
Program ID
Icon ID
Main program
M123456789
1
Subprogram A
S100
A
2
Subprogram B
S200
n
Subprogram Z
S999
13: Grage-up menagement DB
Main program ID
Subprogram ID
Transmit to server
Authentication
Create key code
Select icon
Server
3
Release key code
Release subprogram A
Increment version
Update display icon
Release
Main program
Subprogram A
Subprogram Z
Program memory
Icon B
B
13: Grage-up menagement DB after grade-up
1
Information terminal

FIG. 27

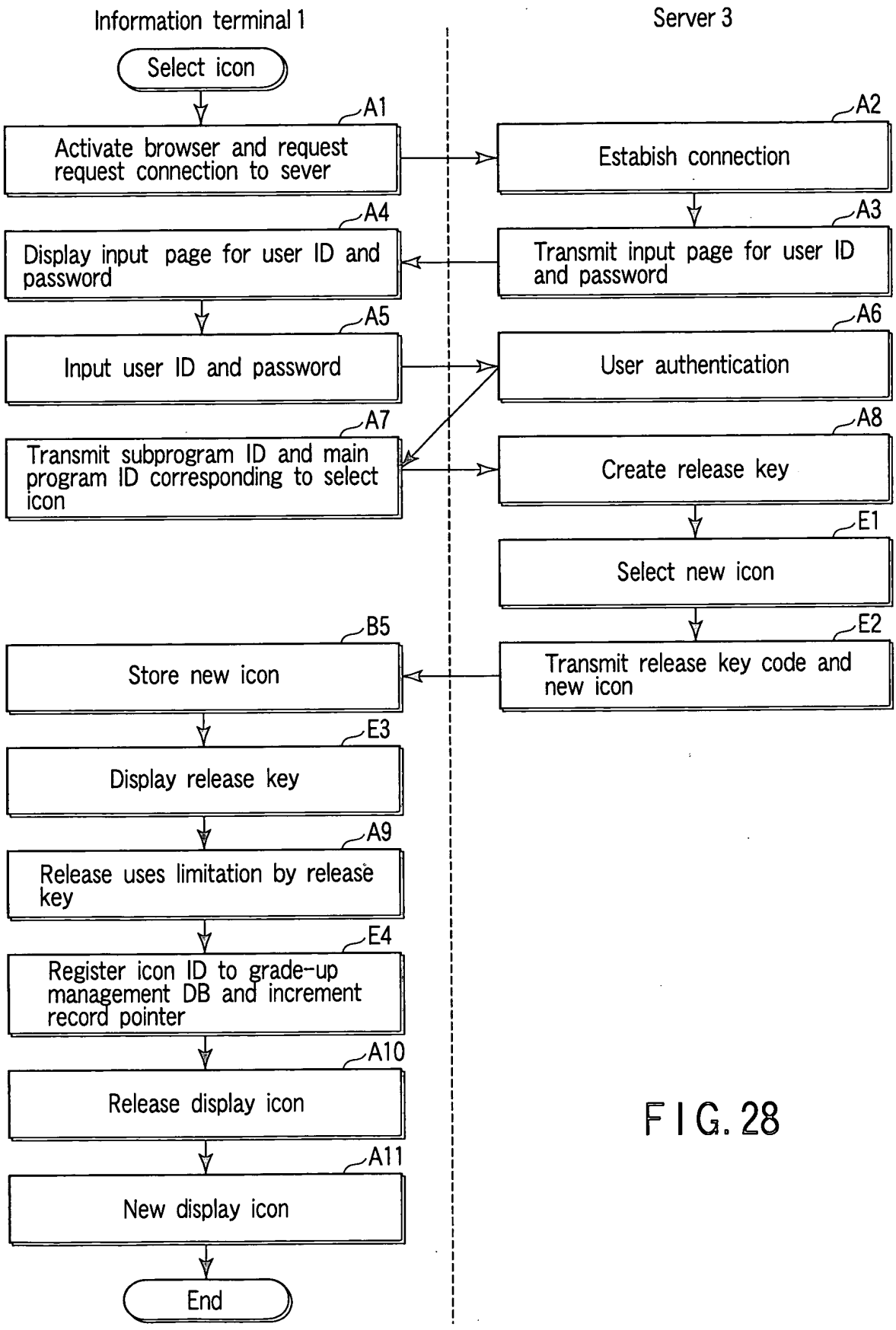
Information terminal 1
Server 3
Select icon
A1
Activate browser and request request connection to sever
A2
Estabish connection
A3
Transmit input page for user ID and password
A4
Display input page for user ID and password
A5
Input user ID and password
A6
User authentication
A7
Transmit subprogram ID and main program ID corresponding to select icon
A8
Create release key
E1
Select new icon
E2
Transmit release key code and new icon
B5
Store new icon
E3
Display release key
A9
Release uses limitation by release key
E4
Register icon ID to grade-up management DB and increment record pointer
A10
Release display icon
A11
New display icon
End

FIG. 28